

WHAT IS CLAIMED IS:

1. A nutraceutical composition comprising an extract from an agricultural by-product and an edible carrier, wherein said by-product is obtained as a result of processing a tropical crop.
2. The nutraceutical composition of Claim 1 wherein said tropical crop is selected from the group consisting of coffee, macadamia, pineapple, taro, papaya, and mango.
3. The nutraceutical composition of Claim 1 wherein said extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.
4. The nutraceutical composition of Claim 1 wherein said extract is comprised of an anti-oxidant.
5. The nutraceutical composition of Claim 1 wherein said by-product is coffee cherry.
6. The nutraceutical composition of Claim 1 which is comprised of a decaffeinated extract of coffee cherry.
7. The nutraceutical composition of Claim 1 which contains water in an amount of about 15% or less, by weight based on total weight.
8. The nutraceutical composition of Claim 1 wherein said edible carrier is a pharmaceutically acceptable carrier.
9. The nutraceutical composition of Claim 1, wherein said nutraceutical composition is fit for human consumption.
10. The nutraceutical composition of Claim 9, wherein said nutraceutical composition is prepared by a process in which a detoxification method is applied.
11. A nutraceutical composition fit for human consumption comprising a decaffeinated extract of coffee cherry and a flavoring agent.
12. A food or beverage fit for human consumption which is comprised of a nutraceutical and a flavoring agent, wherein said nutraceutical is comprised of an extract from an agricultural by-product, and wherein said by-product is obtained as a result of processing a tropical crop.

13. The food or beverage of Claim 12 wherein said tropical crop is selected from the group consisting of coffee, macadamia, pineapple, taro, papaya, and mango.

14. The food or beverage of Claim 12 wherein said flavoring agent is a sweetener.

15. The food or beverage of Claim 12 wherein said extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

16. The food or beverage of Claim 12 wherein said extract is comprised of an anti-oxidant.

17. A process for making a nutraceutical composition which comprises  
obtaining a by-product from a tropical crop,  
intermixing said by-product with a first solvent to produce an admixture comprised of a liquid portion and a solid portion,  
separating at least a part of said liquid portion from said solid portion to produce a liquid extract,  
drying said liquid extract to produce a dry extract, and  
intermixing said dry extract with an edible carrier to produce a nutraceutical composition.

18. The process of Claim 17 further comprising a detoxification step selected from the group consisting of liquid/liquid extraction of the liquid extract with an organic solvent, washing the by-product with water, washing the by-product with a buffered aqueous solution, drying the by-product, heating the by-product with steam, heating the by-product with forced hot air, intermixing the admixture with a solid adsorbent, and intermixing the liquid extract with a solid adsorbent.

19. The process of Claim 17 in which said tropical crop is selected from the group consisting of coffee, macadamia, pineapple, taro, papaya, and mango.

20. The process of Claim 17 in which said first solvent is comprised of a liquid selected from the group consisting of water, an aqueous salt solution, ethanol, isopropanol, n-butanol, glycerol, carbon dioxide, acetone, methyl ethyl ketone, ethyl acetate, propyl acetate, butyl acetate, and mixtures thereof.

21. The process of Claim 17 which further comprises intermixing said solid portion with a second solvent.

22. The process of Claim 17 wherein said dry extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

23. The process of Claim 17 wherein said dry extract is comprised of an anti-oxidant.

24. The process of Claim 17 in which said by-product is coffee cherry.

25. The process of Claim 17 which further comprises decaffeinating said by-product, said liquid extract or said dry extract.

26. The process of Claim 17 which further comprises treating said liquid extract with an ion-exchange resin.

27. The process of Claim 17 which further comprises at least partially drying said by-product prior to said intermixing.

28. The process of Claim 17 wherein said separating is conducted by a method selected from the group consisting of decantation, pressing, filtration, settling, and centrifugation.

29. The process of Claim 17 wherein said nutraceutical composition contains water in an amount of about 15% or less, by weight based on total weight.

30. A process for making a nutritionally-enhanced beverage which comprises  
obtaining a by-product from a tropical crop,  
intermixing said by-product with an aqueous solution to produce an admixture comprised of a liquid portion and a solid portion,  
separating at least a part of said liquid portion from said solid portion to produce a liquid extract, and

intermixing said liquid extract with a flavoring agent to produce a beverage.

31. The process of Claim 30 further comprising a detoxification step selected from the group consisting of liquid/liquid extraction of the liquid extract with an organic solvent, washing the by-product with water, washing the by-product with a buffered aqueous solution, drying the by-product, heating the by-product with steam, heating the by-product

with forced hot air, intermixing the admixture with a solid adsorbent, and intermixing the liquid extract with a solid adsorbent.

32. The process of Claim 30 wherein said flavoring agent is a sweetener.

33. The process of Claim 30 wherein said liquid extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

34. The process of Claim 30 wherein said liquid extract is comprised of an anti-oxidant.

35. The process of Claim 30 which further comprises decaffeinating said by-product, said liquid extract or said beverage.

36. The process of Claim 30 wherein said separating is conducted by a method selected from the group consisting of decantation, pressing, filtration, settling, and centrifugation.

37. The process of Claim 30 which further comprises drying said beverage to produce a dry nutraceutical composition.

38. The process of Claim 37 wherein said dry nutraceutical composition contains water in an amount of about 15% or less, by weight based on total weight.

39. The process of Claim 30 which further comprises intermixing said solid portion with a solvent.

40. A process for making a nutritionally-enhanced beverage which comprises obtaining a by-product from a tropical crop, intermixing said by-product with an aqueous solution to produce an admixture comprised of a liquid portion and a solid portion, wherein said aqueous solution is comprised of a flavoring agent, and

separating at least a part of said liquid portion from said solid portion to produce a beverage.

41. The process of Claim 40 further comprising a detoxification step selected from the group consisting of liquid/liquid extraction of the beverage with an organic solvent, washing the by-product with water, washing the by-product with a buffered aqueous solution, drying the by-product, heating the by-product with steam, heating the by-product with forced

hot air, intermixing the admixture with a solid adsorbent, and intermixing the beverage with a solid adsorbent.

42. The process of Claim 40 wherein said liquid portion is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

43. The process of Claim 40 wherein said liquid portion is comprised of an anti-oxidant.

44. A method for enhancing the nutritional value of a food or beverage which comprises intermixing a food or a beverage with a nutraceutical to produce a nutritionally-enhanced food or beverage, wherein said nutraceutical is intermixed in an amount effective to enhance the nutritional value of the food or beverage, wherein said nutraceutical is comprised of an extract from an agricultural by-product obtained as a result of processing a tropical crop, and wherein said nutritionally-enhanced food or beverage is comprised of a flavoring agent.

45. The method of Claim 44, wherein said processing of said tropical crop employs a detoxification method, and wherein said nutraceutical is thereby rendered fit for human consumption.

46. The method of Claim 44 wherein said extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

47. The method of Claim 44 wherein said extract is comprised of an anti-oxidant.

48. A method of improving or maintaining well-being comprising administering to a subject an effective amount of a nutraceutical composition comprising an extract from an agricultural by-product obtained as a result of processing a tropical crop.

49. The method of Claim 48, wherein said processing of said tropical crop employs a detoxification method, and wherein said extract is thereby rendered fit for human consumption.

50. The method of Claim 48 wherein said administering is by oral ingestion.

51. The method of Claim 48 wherein said extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

52. The method of Claim 48 wherein said extract is comprised of an anti-oxidant.

53. A liquid composition suitable for application to human skin, wherein said liquid composition is comprised of an extract from an agricultural by-product obtained as a result of processing a tropical crop.

54. The composition of Claim 53 wherein said extract is comprised of a substance selected from the group consisting of carbohydrate, sugar, fat, protein, amino acid, vitamin, anti-oxidant, polyphenol, caffeic acid, ferulic acid, and chlorogenic acid.

55. The composition of Claim 53 wherein said extract is comprised of an antioxidant.

56. A method of preventing sunburn, comprising applying the composition of Claim 53 to human skin that is exposed to ultraviolet radiation, wherein said composition absorbs at least part of said ultraviolet radiation.

57. A process for making an enriched nutraceutical composition which comprises obtaining a dry nutraceutical composition,

intermixing said by-product with a first solvent to produce a first admixture comprised of a first liquid portion and a first solid portion,

separating at least a part of said first liquid portion from said first solid portion to produce a first liquid extract,

drying said first liquid extract to produce a dry extract,

intermixing said dry extract with a second solvent to produce an second admixture comprised of a second liquid portion and a second solid portion,

separating at least a part of said second liquid portion from said second solid portion to produce a second liquid extract, and

drying said second liquid extract to produce an enriched extract.

58. The process of Claim 50 in which said by-product is coffee cherry.

59. The process of Claim 58 further comprising a detoxification step selected from the group consisting of liquid/liquid extraction of the first liquid extract with an organic

solvent, liquid/liquid extraction of the second liquid extract with an organic solvent, washing the by-product with water, washing the by-product with a buffered aqueous solution, drying the by-product, heating the by-product with steam, heating the by-product with forced hot air, intermixing the first admixture with a solid adsorbent, and intermixing the second admixture with a solid adsorbent.

60. A method for making a polyphenol-containing nutraceutical, comprising:  
obtaining coffee cherry;  
contacting the coffee cherry with an agent which extracts polyphenols from the coffee cherry to thereby produce a composition comprising a polyphenol; and  
combining the composition with an agent suitable for human consumption to thereby generate a nutraceutical.

61. The method of Claim 60, further comprising detoxifying the coffee cherry to produce detoxified coffee cherry, or detoxifying the composition to produce a detoxified composition.

62. The method of Claim 61, wherein the detoxified coffee cherry has a reduced level of fungal toxins relative to the coffee cherry prior to the detoxifying.

63. The method of Claim 61, wherein the detoxified composition has a reduced level of fungal toxins relative to the composition prior to the detoxifying.

64. A nutraceutical obtained by the method of Claim 60.